Roadway preparations and pavement applications are discussed below. The park is well acquainted with these pavement strategies and strives to utilize those procedures that best accommodate the its needs.

Cold Mix Recycling. After considerable consideration, it was determined that cold mix recycling is not a viable alternative given the physical constraints and climactic conditions of the Road.

Hot Mix Pavement. The park is well aware of and continues to utilize state-of-the-art hot mix pavement technology and equipment as they proceed with maintenance work or contract operations throughout the variable sections of the Road. The alpine environment and constricted roadway conditions do, however, continue to present challenging problems with respect to small and large scale operations. Continued emphasis on the following items should be inherent in the design phase of the rehabilitation. Other ideas and innovative procedures are discussed in later sections of this chapter.

- ***Source.*** The source of the hot mix material should be as close to the project site as feasible to maintain mix temperature (usually batch temperature of about 350° F and delivery/laydown temperature of not less that 275°F). It is possible to transport hot mix an appreciable distance - up to 100 miles if necessary - with special insulated and heated trucks; however, the timeliness and cost factors involved should be carefully considered.

- ***Staging Area.*** It is recommended that a staging area be set up (either by the park or by the contractor) within reasonable distance of each end of the Road to stockpile materials and establish hot mix plant operations and equipment maintenance and servicing activities as necessary. Considering the environmental issues,staging of the plant should be outside the park.

- ***Construction Operations.*** Construction operations, including the establishment of a proper subgrade and the placement of pavement surface courses, should proceed from the Logan Pass area downward, towards each project terminus. This would generally allow paving equipment to operate with gravitational assistance and would also limit the travel of heavy delivery loads on the finished roadway surface. Locating enough space for delivery trucks to safely turn-around may be difficult in many areas.

- ***Equipment.*** Portable hot mix batch plants with production capacities of up to 400 tons/hour are available. However, practical production and delivery for pavement needs on the Road is more likely in the 200 tons/hr. category. Other smaller plants are available and may be more practical, especially if staging areas inside the park boundary are contemplated.

  A combination of track-mounted and rubber wheel-mounted paving equipment should be considered. The track-mounted equipment would provide the necessary traction and stability to traverse the gradients encountered, and the rubber wheel equipment would be able to follow the irregular shoulder and drainage swale areas evident within the alpine section.

- ***Mix Designs.*** It is recommended that hot mix designs be tailored to accommodate the ambient temperatures and gradients encountered throughout the length of the Road. FHWA has established mixes that have been successfully used on the Road in the past. These should be used as a starting point for determining the mix design for the rehabilitation.

- **Night-time Operations.** Limited night-time operations may be viable on some portions of the Road; however, a sustained window of at least eight to ten hours of uninterrupted work is highly desirable. The feasibility of such night-time work would be highly dependent upon weather and climatic conditions, hazard risks at each work site, and comparative cost factors. A thorough discussion of night-time operations is presented earlier in Chapter 2 of this report.

- ***Roadway Appurtenances.*** A significant amount of hand work may be needed in order to place and compact pavement material around drainage structures, adjacent to the rock face of the backslope, and along rock guardwall and retaining wall sections. Machine rotomilling and paving operations can be effective to within one foot of these appurtenances.

Chip seal/emulsified seal/slurry seal. Chip seals or emulsified seals could be used on existing pavements to minimize moisture intrusion and foundation failures. These applications could be a valuable interim measure to protect the existing facilities, and could provide a higher quality riding surface prior to rehabilitation or overlay work. Slurry seals would not be practical for use on the Road.